PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:

REBECCA E. CAHOON ET AL. CASE NO.: BB1201 US CNT

APPLICATION NO.: UNKNOWN GROUP ART UNIT: UNKNOWN

FILED: HEREWITH EXAMINER: UNKNOWN

FOR: VITAMIN B METABOLISM PROTEINS

PRELIMINARY AMENDMENT

Commissioner of Patents and Trademarks
Washington, DC 20231

Sir:

Prior to examination, please amend the captioned application as follows and consider the following remarks.

IN THE SPECIFICATION:

Please replace the following paragraphs:

First paragraph on page 1:

This application is a continuation application of U.S. Application No. 09/370,295, filed August 9, 1999, which claims the benefit of U.S. Provisional Application No. 60/096,342, filed August 12, 1998.

First complete paragraph on page 6:

"Codon degeneracy" refers to divergence in the genetic code permitting variation of the nucleotide sequence without affecting the amino acid sequence of an encoded polypeptide. Accordingly, the instant invention relates to any nucleic acid fragment comprising a nucleotide sequence that encodes all or a substantial portion of the amino acid sequences set forth herein. The skilled artisan is well aware of the "codon-bias" exhibited by a specific host cell in usage of nucleotide codons to specify a given amino acid. Therefore, when synthesizing a nucleic acid fragment for improved expression in a host cell, it is desirable to design the nucleic acid fragment such that its frequency of codon usage approaches the frequency of preferred codon usage of the host cell.

IN THE CLAIMS:

Please cancel claims 1-12.

Please add the following claims:

13. "added" An isolated polynucleotide that encodes a thiamin pyrophosphokinase, wherein the polypeptide has a sequence identity of at least 80%, based on the Clustal method of alignment, when compared to a polypeptide selected from the group consisting of SEQ ID NOs:2, 4, 6, and 8.

14. "added" The polynucleotide of Claim 13 wherein the sequence identity is at least 90%.

15. "added" The polynucleotide of Claim 13 wherein the sequence identity is at least 95%.

16. "added" The polynucleotide of Claim 13 wherein the polynucleotide encodes a polypeptide selected from the group consisting of SEQ ID NOs:2, 4, 6, and 8.

17. "added" The polynucleotide of Claim 13, wherein the polynucleotide comprises a nucleotide sequence selected from the group consisting of SEQ ID NOs:1, 3, 5, and 7.

18. "added" An isolated complement of the polynucleotide of Claim 13, wherein (a) the complement and the polynucleotide consist of the same number of nucleotides, and (b) the nucleotide sequences of the complement and the polynucleotide have 100% complementarity.

19. "added" A chimeric gene comprising the polynucleotide of Claim 13 operably linked to at least one regulatory sequence.

20. "added" A cell comprising the polynucleotide of Claim 13.

21. "added" The cell of Claim 20, wherein the cell is selected from the group consisting of a yeast cell, a bacterial cell and a plant cell.

22. "added" A virus comprising the polynucleotide of Claim 13.

23. "added" A transgenic plant comprising the polynucleotide of Claim 13.

24. "added" A method for transforming a cell comprising introducing into a cell the polynucleotide of Claim 13.

25. "added" A method for producing a transgenic plant comprising (a) transforming a plant cell with the polynucleotide of Claim 13, and (b) regenerating a plant from the transformed plant cell.

REMARKS

Claims 1-12 have been canceled and claims 13-25 added. Claims 13-25 correspond to the allowed claims of the parent application, U.S. Application No. 09/370,295. No new matter is added by the addition of claims 13-25.

Entry of the amendments and favorable consideration of the application are respectfully requested.

Respectfully submitted,

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Dated: 2/25/02

VERSION WITH MARKINGS TO SHOW CHANGES MADE

In showing the changes, deleted material is shown as brackets, and inserted material is shown underlined.

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IN THE CLAIMS:

Claims 1-12 canceled.

Claims 13-25 added.